

THURSDAY, APRIL 22, 1875

THE ANCIENT MONUMENTS BILL.

IT is so far gratifying that Sir John Lubbock's bill for the preservation of the few remains of our ancient monuments that time and the ignorant or sacrilegious hand of the spoiler have left, passed the second reading by a respectable majority on Wednesday week. The Committee was fixed for yesterday, and we hope the bill will pass through the ordeal with its main principle and provisions intact. As our readers are doubtless familiar with the purpose and main details of the bill, which has been before the public for three years, it is unnecessary to expound them here, especially as we have already done so in a previous article (*NATURE*, vol. vii., p. 297).

The objections urged against the bill, both in the House of Commons and in the *Times* article of Monday, seem to us either frivolous or inapplicable. They may be all summed up in the statements that the bill interferes with the sacred right of private property, and that it is unnecessary, as private owners and the public generally are fully aware of the value of our historic and prehistoric relics, and that no special provision is required for their preservation.

As to the objection that the bill will interfere with the individual rights of property, we can hardly believe that even those who most strongly urged it really believe that this objection will hold water. Were the bill as it stands passed into law, landowners on whose estates any ancient monuments are situated that the Commissioners thought came under the operation of the Act, would be in exactly the same position to the relics as before, with the exception that they would not be allowed to do anything tending to their injury or destruction. And we hardly think that even any of the honourable objectors to the bill would openly declare that they held the right of destruction of a national monument to be one of the rights of private property. Nearly all the objectors expressed their respect for the remains left behind by the previous populations of this country, and their anxiety that no harm should come to them; and this the bill proposes to accomplish in a way that cannot possibly be done so long as these monuments are the absolute property of private individuals.

For the opponents of the bill in Parliament, as well as the *Times*, may talk as they will of the public spirit of the country being a sufficient safeguard against the ruthless destruction of these relics which all but the lowest class of philistines must regard as precious; but there is no doubt whatever that for want of a provision such as that contained in the bill, many of the most valuable of our ancient monuments have suffered grievous and irreparable harm. No more forcible instance could be adduced than that of "Cæsar's Camp" at Wimbledon, which, under the eyes of the public, and by members of that public whose "spirit" is so much lauded, is being rapidly obliterated from the land. No one can at present prevent it. And over all the country there are remains of equal value whose preservation it is nobody's business to see to, and which therefore, by destructive time, by philistia tourists and owners, or ignorant farmers and peasants, are gradually being made to share the fate of Cæsar's Camp. Had such a bill been passed a century or even half a century

ago, how much valuable material might have been saved to the student of history and antiquities, to the investigator into the progress of civilisation and of the human race!

The *Times*, for some inscrutable reason, has seen meet to oppose the bill to a great extent on practical grounds, as if its purpose were to preserve every relic of the past that might come to light, no matter at what expense to the public welfare and convenience. But the writer of the article either ignorantly or wilfully mistakes the purpose of the bill altogether; we believe that all the monuments enumerated are so situated, are at such a distance from the "busy haunts of men," that their preservation neither now nor at any future time is likely to interfere with the convenience and welfare of the existing population. It is simply stupid to speak in this connection of fragments of old walls and tessellated pavements unearthed in London; Sir John Lubbock himself, we believe, and those who support the bill, would have no hesitation in sweeping away any ancient monument whatever, if it could be really shown that it stood in the way of the progress of the country and the race. But in the *Times* article there is an unmistakable inclination to doubt the "utility" of taking any care at all to preserve the monuments left by our predecessors; the writer evidently cannot see that it serves any "practical" purpose. Not even any of the opponents of the bill objected to it on this score. The objection is similar to that which the same paper urged against the Arctic Expedition, and might with equal force be urged against every undertaking and every pursuit that had not some unmistakable so-called "practical" end immediately in view. Were such a principle to have sway, then all science might be "thrown to the dogs;" but it is too late in the day to bring it forward: and with regard to our ancient monuments, we feel sure that all the intelligent portion of the nation would revolt were it proposed to take no further care of them, but allow them either to crumble or be carted away. There is no security against such a fate for them unless by some such enactment as that which the bill proposes. And, after all, we believe that the *Times* itself would advocate the preservation of even a fragment of tile, if it could be shown that it would in any way conduce to the highest good of the race.

Sir John Lubbock's reply to the objections urged in the House of Commons is so admirable and so much to the point, that we shall conclude by giving it almost entire. There is a certain touch of well-deserved scorn in his remarks upon some of the trivial objections which were brought forward.

"It would not be denied by anyone," he said, "that our ancient monuments were gradually disappearing, victims of the increased value of land and the demand for road material and building stones. Now, he asked hon. members to look at the ancient monuments in their own districts mentioned in that bill, and tell him which of them they would see destroyed without regret. Was it Silbury Hill, the grandest sepulchral monument, perhaps, in Europe? Was it Avebury, the most remarkable of the so-called Druidical structures? Was it Stonehenge, enigmatical and unique? Was it Arthur's Round Table, or the Rollrich stones, Kitscoty House, or Wayland Smith's Forge, dear to all readers of Sir Walter Scott? Or, turning to Scotland, was it the curious Dun of Dornadilla? Was it the Burgh of Moussa, the only one, he believed, mentioned in the Sagas, and which is even now nearly perfect? Was it Sueno's Stone? or the Cats

Stane, with its inscription said to be in memory of Vetta, the son of Hengist? Was it the Newton Stone, with its inscription as yet altogether unread? Was it Maeshowe, with its runic records? or the Ring of Brogar? or the Stones of Stennis, with all their romantic associations? In Ireland, was it the Giant's Ring, near Belfast? Was it the curious fortification known as Staigue Fort? Was it the remarkable tumulus of Newgrange, with its curious decorations? Was it the ruins of Teltain, or the remains of the hill of Tara associated so intimately with the earliest of Irish records? He hoped that the bill would be rejected neither by Englishmen nor Scotchmen; and Irishmen surely would not grudge a slight and almost infinitesimal expense for the preservation of these fragments of early Irish history. Indeed, the expense entailed by the measure would be very trifling; the amount, moreover, would be settled by the Treasury and controlled by the House of Commons. Those monuments had passed through great dangers. They had been spared by Roman soldiers, by Britons, Saxons, Danes, and Normans; they were respected in days of comparative poverty and barbarism; in these days of enlightenment and civilisation, of wealth almost beyond the dreams of avarice, they were in danger of being broken up for a profit of a few pounds or removed because they cumbered the ground. If the House allowed them to be destroyed, they could never be replaced. It was said that the bill would interfere with the rights of property. What rights? The right of destroying interesting national monuments. That was the only right that would be interfered with. It was not incidental to the bill, it was no drawback in the bill, it was the very object of the measure. It was really, however, the rights of destruction, not the rights of possession, which it touched. It was now for the House to determine whether it would exercise on behalf of the nation the right to preserve those monuments; whether it would maintain the right of individuals to destroy, or the right of the nation to preserve. He hoped the House would agree to the second reading of the bill, for it would surely be a shame and a disgrace to allow those ancient monuments to perish."

We are sure Parliament, if it passes the bill in its entirety, will have not only the approval of the nation, but the admiration of educated men all the world over.

PRACTICAL PHYSICS

Introduction to Experimental Physics. By A. F. Weinhold, Professor in the Royal Technical School at Chemnitz. Translated and edited by B. Loewy, F.R.A.S. With a Preface by Prof. G. C. Foster, F.R.S. (London: Longmans, 1875.)

IN English schools of the present day the teaching of Experimental Physics is, with few exceptions, either neglected or abused. Yet there can be little doubt that this subject ought to be an integral part of the secondary education of every boy and girl. Its usefulness merely as knowledge that touches us at every point in daily life, and that finds its development intimately associated with many modern trades and professions, is a tangible argument in its favour. But it is as a means of education, rather than as a vehicle of instruction, that physics should be taught in schools. And this because of its high power—when properly taught—of educating individual judgment, by training the senses to habits of accurate observation and the mind to clear and precise modes of thought. Added to all this, practical physics confers the benefit, by no means to be lightly regarded, of giving to the hands the power of useful skill.

Prof. Foster well remarks, in his excellent preface to the work before us: "In the study of physics we are obliged not only to learn a large number of new facts, but also to adopt new habits of learning; while we have at the same time to accustom ourselves to attach accurately defined meanings to the terms employed in discussing physical phenomena, and to reason about them with mathematical strictness, and often by the help of technical mathematical methods. These characteristics of the study of physics give to it a value, as a means of training in habits of exact thinking, which probably no other study possesses in the same degree; but at the same time they make this study more than usually difficult, especially to beginners."

It is this felt difficulty, no doubt, that largely contributes to the exclusion of physics from the general curriculum of our schools and colleges. And where physics is introduced, it is, we fear, too often badly taught, for its method of teaching is misunderstood. It generally proceeds upon the old lines of the black board and text-book. Nor is this to be wondered at. For if a schoolmaster be really anxious to teach experimental physics thoroughly, he is staggered at the multiplicity and cost of the apparatus involved, and out of this difficulty our text-books have hitherto shown him no way of escape.

Where experimental science is honestly attempted, chemistry is found to be less formidable; it also abounds in useful practical class-books, and so this subject is far more widely taught than physics. To many parents and schoolmasters chemistry has become the embodiment of all their thoughts of science. Fumes, explosions, and mess, are, to a large section of the public, inevitably associated with their idea of natural knowledge in general, and experimental knowledge in particular. The replacement of physics by chemistry in schools is much to be regretted on educational grounds; for, so far as the present writer's experience goes, it is decidedly adverse to making chemistry the first or chief part of the scientific training of youth. Nor is there much likelihood of seeing experimental physics generally taught in schools until there are good text-books on practical physics that will enable the student to construct his own apparatus as he proceeds.

On these grounds chiefly we are glad to welcome the present translation of Prof. Weinhold's "*Vorschule der Experimental Physik*." By following the full and excellent directions given by Prof. Weinhold, any intelligent lad can be his own instrument maker; and besides the pleasure of construction, he will acquire a sound and extensive acquaintance with the elements of physics by the time he has carefully gone through the book.

Knowledge thus obtained will be ineffaceably written on the memory, and its worth will be far greater than a corresponding expenditure of time spent in merely reading several of the ordinary class-books. Nor can there be any doubt, as Prof. Foster says, that "whenever this or some similar work comes to be commonly adopted in schools, physics will be in a fair way of becoming one of the most popular as well as most useful parts of school-work, instead of being, as it too often now is, less liked and worse taught than almost any other subject."

One great merit of Prof. Weinhold's hand-book is its great detail. Nothing is more provoking than the vague